Heat Transport in High Temperature Hohlraums*

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We are using the "FPI" Fokker-Planck code to calculate heat transport in strongly-driven, high Z plasmas such as occur in high temperature hohlraums. The laser intensity is high ($I_0 \sim 10^{16} \ \text{W/cm}^2$, $\lambda_{L^{\infty}} 0.35 \mu \text{m}$, and the ion charge is large, Z » 1, so that $\alpha = Z[v_{0s}/v_e]^2 \sim 1$ and the isotropic part of the electron energy distribution is flat-topped, $f_0 \sim \exp[-b(E/T_e)^{m/2}]$, b=1 for m=2, and b=0.135 for m=5. The electron heat transport coefficient is strongly reduced in the absorption region. Nonlocal heat transport in the heat conduction region is much larger than classical ($Q_{max} \sim 200 \ Q_{Spitzer-Harm}$)!

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